# CHALUPA #4 SWD – NORTH RELEASE AREA Remediation Summary & Closure Report

NMOCD Incident No. nOY1706631442 UL "L", Sec. 13, T14S, R33E 33.103422°, -103.576112° Lea County, New Mexico

June 5, 2023



## PREPARED ON BEHALF OF

Foundation Energy Management 1801 Broadway Suite 1500 Denver, CO 80202



## PREPARED BY

Tasman, Inc. 2620 W. Marland Blvd. Hobbs, NM 88240





June 5, 2023

Foundation Energy Management, LLC 1801 Broadway, Suite 1500 Denver, Colorado 80202

Attn: Mr. James Smith Email: jsmith@foundationenergy.com

Re: Remediation Summary and Closure Report Chalupa SWD #4 – North Release Area UL "L", Section 13, Township 14 South, Range 33 East Lea County, New Mexico NMOCD Incident No. nOY1706631442 Tasman Project No. 4951

Dear Mr. Smith,

Tasman, Inc. (Tasman) is pleased to submit this Remediation Summary and Closure Report for the above referenced site. Remediation activities were executed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations and the Remediation Action Plan approved on February 14, 2023.

Tasman appreciates the opportunity to provide environmental services to Foundation Energy Management. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely, Tasman, Inc.

Brett Dennis Senior Environmental Scientist bdennis@tasman-geo.com Kyle Norman Regional Project Manager <u>knorman@tasman-geo.com</u>



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- Appendix C Photographic Log
- Appendix D Certified Laboratory Analytical Report

Appendix E – Closure Form (FORM C-141)



# 1.0 INTRODUCTION

Tasman, Inc. (Tasman) is pleased to submit this Remediation Summary and Closure Report for the Chalupa SWD #4 – North Release Area (site) on behalf of Foundation Energy Management (FEM), documenting the results of field activities conducted in response to a release of produced water to environmental media.

# 1.1 Site Description

The site is located in Unit Letter "L" of Section 13, Township 14 South, Range 33 East in Lea County, New Mexico. The Site is located approximately 0.3 miles south of State Highway 108 (Anderson Road) in a rural area on New Mexico State Trust Lands administered by the New Mexico State Land Office (NMSLO) and leased to Norman and Elwanda Hahn Ranches, LTD for agriculture use. The nearest town of Lovington, New Mexico is located approximately 16 miles southeast of the Site. A Site Location Map is included as Figure 1.

# 1.2 Site History

On March 2, 2017, FEM discovered a release of produced water at the Site from a leak that developed in the pipeline connecting FEM's tank battery to the Chalupa #4 injection well, which is approximately 600-feet south of the tank battery location. Approximately 25 barrels (bbls) of saltwater were released to the ground surface and approximately 15 bbls were recovered.

On March 6, 2017, FEM submitted a Release Notification Corrective Action Form C-141 to the NMOCD for the release and the NMOCD established a maximum permissible chloride concentration in soil of 600 milligrams per kilogram (mg/kg). A copy of the form C-141 is attached as Appendix A. On behalf of FEM, Enviro Clean Cardinal, LLC (ECC) performed initial Site investigation activities which included a walkover survey using an EM-38 electrical conductivity (EC) meter and soil boring activities to delineate the horizontal and vertical extents of chloride impacts. As presented in the Release Characterization Report that was submitted to the NMOCD on February 16, 2018, the lateral extent of chloride impacts at the Site covered approximately 1.76 acres and a depth of 9 to 14 feet below ground surface (bgs).

Subsequent to the initial response and investigation activities described above, FEM retained Tasman to conduct additional Site assessment, remediation, and reclamation activities at the Site within the root zone between the surface and 4 feet bgs as described in the Remediation Work Plan, which was approved by the NMOCD on June 6, 2018, and by the NMSLO on June 8, 2018.



Between May 8 and 19, 2019, chloride impacted soil excavation activities were initiated within the release area between the surface and approximately 4 feet bgs. Approximately 9,013 cubic yards (yd<sup>3</sup>) of chloride impacted soil were transported under waste manifest procedures to an NMOCD approved disposal facility (Gandy Marley Inc.) located near Caprock, New Mexico. On May 22, 2019, prior to backfilling activities, a 20-millimeter-thick liner low-density polyethylene (LLDPE) sealed liner manufactured by Raven Industries, Inc. was installed at the base of the excavation area. On May 23, 2019, approximately 7,538 yd<sup>3</sup> of sand were backfilled in the excavation to a depth of 18 inches bgs and approximately 2,897 yd<sup>3</sup> of clean topsoil were backfilled and compacted within the disturbed area to match the previous grade. Imported fill material, including sand and topsoil, was sourced from Gandy Marley, Inc., located in Lea County, New Mexico.

On June 6, 2019, the NMSLO approved an amended seed mixture to be used at the Site and on September 11, 2019, prior to heavy precipitation events that were forecasted for the area, reseding activities were performed at the Site using a tractor with a drop seed tiller. During a Site visit on October 8, 2019, to observe vegetation re-growth at the Site, Tasman personnel observed sprouted seedlings throughout the disturbed area indicating that the re-seeding effort has successfully propagated vegetation at the Site.

On December 23, 2019, FEM submitted a *Remediation and Reclamation Summary Report*, dated October 29, 2019, to the NMOCD summarizing remedial efforts at the Site.

On October 19, 2022, the NMOCD provided email notification to FEM indicating that the submitted Report was rejected and additional confirmation sampling was required for Site closure.

On November 11, 2022, Tasman mobilized to the Site to collect confirmation soil samples in accordance with NMOCD email correspondence, dated October 31, 2022. Thirty (30) soil borings were advanced using a hand auger along the perimeter of the former excavation area. Soil samples were collected continuously to a depth of approximately 4 feet bgs. Composite soil samples were collected from each boring across a total area of 200 square feet. Additionally, four discrete soil samples were collected from the backfill material of the former excavation at a depth of 3.5 feet bgs. Samples were collected above the liner to prevent damage to the existing liner.

On December 27 and 28, 2022, Tasman mobilized to the Site to further delineate remaining chlorides impacts in the area of exceedances observed during the November 2022 confirmation sampling event. A total of 16 soil borings (HA-1 through HA-15, BG-1) were advanced using a hand auger to a depth of 4 feet bgs or geologic refusal.



On February 13, 2023, Tasman submitted a Remediation Action Plan (RAP) for the site, on behalf of FEM, to the NMOCD.

On February 14, 2023, NMOCD approved the RAP with the condition that confirmation soil samples would represent 400 square feet (ft<sup>2</sup>).

#### REMEDIATION ACTION LEVELS 2.0

NMOCD assessment and cleanup levels for hydrocarbon and produced water releases are based on depth to groundwater and proximity to sensitive receptors as established in NMAC 19.15.29. Based on site characteristics described in previous reports, the NMOCD Action Levels for the site are as follows:

Constituent	Remediation Action Level
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
TPH (GRO+DRO)	N/A
BTEX	50 mg/kg
Benzene	10 mg/kg
TPH – total petroleum hydrocarbons	GRO – gasoline range organics
DRO – diesel range organics	MRO – motor/lube oil range organics
BTEX – benzene, toluene, ethylbenzene, total xylenes	mg/kg – milligrams per kilogram

#### **Reclamation Levels** 2.1

NMAC 19.15.29.13(D) codifies, and the Procedures for Implementation of the Spill Rule, dated September 6, 2019, clarifies that the top four feet of the remediated area should be non-waste containing. Therefore, the NMOCD Reclamation Standards are applied to the top four feet of any area impacted by a release that is not located within an active production facility. NMOCD Reclamation Standards are as follows:

Constituent	Reclamation Standard
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg
TPH – total petroleum hydrocarbons	GRO – gasoline range organics
DRO – diesel range organics	MRO – motor/lube oil range organics
DTEV honzono toluono othulhonzono total vulonos	ma/ka milliarama par kiloaram

BTEX – benzene, toluene, ethylbenzene, total xylenes

mg/kg – milligrams per kilogram



# 3.0 SOIL SAMPLING PROCEDURES

# 3.1 Soil Sampling Procedures for Laboratory Analysis

The collection of soil samples for laboratory analysis was conducted in accordance with NMOCD criteria and generally approved industry standards. Collected soil samples were placed in laboratory provided containers, properly labeled, and preserved on ice pending delivery under a chain of custody form to Cardinal Laboratory in Hobbs, New Mexico.

# 3.2 Soil Analytical Methods

Each soil sample was analyzed using Environmental Protection Agency (EPA) methods or other NMOCD-approved methods. Laboratory analytical methods are as follows:

• Chloride – EPA Method SM4500.

# 4.0 SUMMARY OF REMEDIAL ACTIVITIES

# 4.1 Remedial Activities

From March 14 to 22, 2023, Tasman utilized heavy equipment to excavate impacted soil from within the delineated areas, identified as Areas 1 through 6. Excavated material was stockpiled on-site atop a polyethylene liner pending transportation to an NMOCD approved disposal facility.

A total of 2,320 yds<sup>3</sup> of excavated material from Areas 1 through 6 was exported to Gandy Marley Landfill. Copies of solid manifests are provided in Appendix B and a photographic log is provided in Appendix C.

# 4.2 Confirmation Data Evaluation

On March 20 and 21, 2023, Tasman mobilized to the site to collect five-point composite confirmation soil samples from the base and sidewalls of the remedial excavations representing approximately 400 ft<sup>2</sup>. Confirmation sidewall samples were collected at approximately half the depth of each excavation.

# <u>Area 1</u>

Four confirmation soil samples were collected from the base and two confirmation soil samples were collected from the side walls of the Area 1 excavation. Chloride concentrations were detected above the laboratory reported detection limit (RDL) in each of the confirmation soil



samples, but below NMOCD Action Levels. Concentrations of chlorides ranged from 32.0 milligrams per kilogram (mg/kg) in multiple samples to 336 mg/kg in soil sample A1-W-2.

## Area 2

Three confirmation soil samples were collected from the base and one confirmation soil sample was collected from the side walls of the Area 2 excavation. Chloride concentrations were detected above the laboratory RDL in each of the confirmation soil samples. The chloride concentration of soil sample A2-FL-1 (624 mg/kg) exceeded the NMOCD Action Level. The remaining chloride concentrations ranged from 144 mg/kg in soil sample A2-FL-2 to 576 mg/kg in soil sample A2-FL-3.

# Area 3

Five confirmation soil samples were collected from the base and two confirmation soil samples were collected from the side walls of the Area 3 excavation. Chloride concentrations were detected above the laboratory RDL in each of the confirmation soil samples. The chloride concentration of soil samples A3-FL-1 (1,360 mg/kg), A3-FL-2 (960 mg/kg), A3-FL-3 (800 mg/kg) exceeded the NMOCD Action Level. The remaining chloride concentrations ranged from 128 mg/kg in soil sample A3-W-1 to 544 mg/kg in soil sample A3-FL-4.

## Area 4

Two confirmation soil samples were collected from the base and one confirmation soil sample was collected from the side walls of the Area 4 excavation. Chloride concentrations were detected above the laboratory RDL in each of the confirmation soil samples, but below NMOCD Action Levels. Concentrations of chlorides ranged from 224 mg/kg in soil sample A4-W-1 to 336 mg/kg in soil sample A4-FL-1.

# <u>Area 5</u>

Twelve confirmation soil samples were collected from the base and three confirmation soil samples were collected from the side walls of the Area 5 excavation. Chloride concentrations were detected above the laboratory RDL in each of the confirmation soil samples. The chloride concentration of soil samples A5-FL-1 (624 mg/kg), A5-FL-2 (720 mg/kg), A5-FL-3 (880 mg/kg), A5-FL-10 (1,120 mg/kg), A5-FL-11 (1,090 mg/kg), and A5-FL-12 (1,790 mg/kg) exceeded the NMOCD Action Level. The remaining chloride concentrations ranged from 48.0 mg/kg in soil sample A5-FL-5 to 544 mg/kg in soil sample A5-W-1.

## Area 6

Five confirmation soil samples were collected from the base and one confirmation soil sample was collected from the side walls of the Area 6 excavation. Chloride concentrations were detected above the laboratory RDL in each of the confirmation soil samples, but below NMOCD Action Levels. Concentrations of chlorides ranged from 32.0 mg/kg in soil sample A6-FL-4 to 240 mg/kg in soil sample A6-FL-1.

A summary of laboratory analytical results is provided as Table 1 and laboratory analytical reports are attached as Appendix D.



# 4.3 LINER INSTALATION

On March 29, 2023, Tasman mobilized to the site to install liners in areas that exceeded the NMOCD Action Level for chlorides, per the RAP approved on February 14, 2023. Prior to installation, areas requiring a liner were padded with approximately six inches of backfill material to prevent damage to each liner. The liners were then installed over areas exceeding NMOCD Action Levels at Areas 2, 3 and 5

# 5.0 RESTORATION AND RECLAMATION

Areas affected by the release and associated remediation activities were restored to the condition which existed prior to the release to the maximum extent possible. Excavated areas were backfilled with non-impacted "like" material and contoured and/or compacted to achieve erosion control, stability, and preservation of surface water flow to the extent practicable. On May 17, 2023, Tasman seeded and tilled the Site with a State Land Office (surface owner) approved blend of native vegetation.

# 6.0 SITE CLOSURE REQUEST

Based on laboratory analytical results from soil samples collected during the confirmation sampling events, impacted soil within the release area has been remediated below the applicable NMOCD Action Levels in accordance with NMAC 19.15.29. Areas exceeding NMOCD action levels have been addressed with an impermeable barrier to prevent migration of chemicals of concern to groundwater. As such, Tasman, on behalf of FEM, respectfully requests that the site be granted closure (Appendix E).

**FIGURES** 



Received by OCD: 6/19/2023 10:25:55 AM





TABLE

### TABLE 1

#### CONFIRMATION SOIL ANALYTICAL SUMMARY - CHLORIDES Foundation Energy Management, LLC Chalupa #4 SWD - North Release Area

Sample ID	Sample	Sample Date	Chrloride <sup>1</sup>
	Depth (bgs)		(mg/kg)
	1	rea 1	
A1-FL-1	4	3/20/2023	32.0
A1-FL-2	4	3/20/2023	32.0
A1-FL-3	4	3/20/2023	128
A1-FL-4	4	3/20/2023	320
A1-W-1		3/20/2023	32.0
A1-W-2		3/20/2023	336
	1	rea 2	
A2-FL-1	4	3/21/2023	624
A2-FL-2	4	3/21/2023	144
A2-FL-3	4	3/21/2023	576
A2-W-1		3/21/2023	512
		rea 3	
A3-FL-1	4	3/21/2023	1,360
A3-FL-2	4	3/21/2023	960
A3-FL-3	4	3/21/2023	800
A3-FL-4	4	3/21/2023	544
A3-FL-5	4	3/21/2023	368
A3-W-1		3/21/2023	128
A3-W-2		3/21/2023	240
	A	rea 4	
A4-FL-1	2	3/20/2023	336
A4-FL-2	2	3/20/2023	256
A4-W-1	2	3/20/2023	224
	Α	rea 5	
A5-FL-1	4	3/20/2023	624
A5-FL-2	4	3/20/2023	720
A5-FL-3	4	3/20/2023	880
A5-FL-4	4	3/20/2023	320
A5-FL-5	4	3/20/2023	48.0
A5-FL-6	4	3/20/2023	160
A5-FL-7	4	3/20/2023	256
A5-FL-8	4	3/20/2023	400
A5-FL-9	2	3/20/2023	64.0
A5-FL-10	2	3/20/2023	1,120
A5-FL-11	2	3/20/2023	1,090
A5-FL-12	2	3/20/2023	1,790
A5-W-1		3/20/2023	544
A5-W-2		3/20/2023	80.0
A5-W-3		3/20/2023	304
	A	rea 6	
A6-FL-1	4	3/21/2023	240
A6-FL-2	4	3/21/2023	160
A6-FL-3	4	3/21/2023	48.0
A6-FL-4	4	3/21/2023	32.0
A6-FL-5	4	3/21/2023	80.0
A6-W-1		3/21/2023	192
NM	OCD Action Le	vels <sup>2</sup>	600

#### Notes:

1. Chloride - Analyzed by EPA method SM4500

2. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (NMAC 19.15.29.12(N))

BGS = Below ground surface

--- = Sample was not analyzed for this analyte

<SDL = The analyte was not detected above the laboratory

sample detection limit (SDL)

N/A = Not applicable

Bold values denote concentrations above laboratory SDL

Red values denote concentrations above NMOCD Action Levels

# **APPENDIX A – INITIAL FORM C-141 AND NMOCD NOTIFICATIONS**

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## State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr.

Form C-141 Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505					
<b>Release Notification and Corrective Action</b>					
<b>OPERATOR</b> Initial Report Final Report					
Name of Company Foundation Energy Management, LLC		Contact Rach			·
Address 16000 Dallas Parkway, Suite 875			No.918-526-5592		
Facility Name Chalupa SWD		Facility Typ	e Salt water disposa	al well	
Surface Owner	Mineral Owner			API No	. 30-025-29184
	LOCATIO	N OF RE	LEASE		
Unit Letter Section Township Range Fe		/South Line	Feet from the	East/West Line	County
M  13  14S  33E  33	30 SOL	uth	330	West	Lea
Latitu	de 33.0982437	Longitud	le103.57539	937	
2	NATURE				
Type of Release Saltwater	TATURE		Release 125 bbls	Volume F	Recovered 25 bbls
Source of Release Injection hose came loose because of corroded	clamps	Date and H	lour of Occurrent		Hour of Discovery 2/23/2017, 12pm
Was Immediate Notice Given?	Net Derei 1	If YES, To	Whom?	ia Yu	
	D 🗌 Not Required				
By Whom? Rachel Grant Was a Watercourse Reached?			lour 2/24/2017, 9am	the Watercourse	
Yes No.	0		mpuoting	N	JA
NA RECEIVED By Olivia Yu at 8:15 am, Mar 07, 2017 Describe Cause of Problem and Remedial Action Taken.* Vacuum truck was called out immediately to vacuum free-standing fluid on location. Roustabout service was called to replace the flexible hose with a new one and use hammer unions to connect the hose to the injection line to prevent future spills.					
Describe Area Affected and Cleanup Action Taken.* Working procedure for remediation.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
XIII			OIL CON	SERVATION	DIVISION
Signature:		ing an and			M
Printed Name: Rachel Grant		Approved by	Environmental S	pecialist:	<u> </u>
Title: HSE/Regulatory Manager		Approval Dat	<sub>e:</sub> 3/7/2017	Expiration 1	Date:
E-mail Address: regulatory@foundation	energy.com	Conditions of	Approval:		Attached I
Date: 3 6 17 Phone: 918	8-526-5592		ached dire	ctive	Attached
Attach Additional Sheets If Necessary					
		1RP-46	32 pOY	1706631065	nOY1706630747

Released to Imaging: 7/7/2023 11:24:31 AM

Received by OCD: 6/19/2023 10:25:55 AMof New Mexico

Page 3

Oil Conservation Division

Incident ID	nOY170663 Page 17 of 48
District RP	
Facility ID	
Application ID	

# Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>73</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🖾 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🖾 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗋 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	🗌 Yes 🛛 No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### Characterization Report Checklist: Each of the following items must be included in the report.

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- $\square$  Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Received by OCD: 6/19/2023 10:25:55 AM of New Mexico age 4 Oil Conservation Division	Incident ID District RP Facility ID Application ID	nOY170663 Page 18 of 48
Timed Name. Junes Smith	the operator of liability shourd water, human health	ould their operations have or the environment. In deral, state, or local laws
OCD Only       Received by:   Date:		

Received by OCD: 6/19/2023 10:25:55 AMe of New MexicoPage 5Oil Conservation Division

Incident ID	noy 106 Page 19 of 48
District RP	
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.  Printed Name: James Smith Title: HSE-Regulatory Superviso email: jsmith@foundationenergy.com Telephone: 972-707-2595
OCD Only Received by: Jocelyn Harimon Date: 02/13/2023
Approved Approved with Attached Conditions of Approval Denied Deferral Approved
Signature: Hall Date: 2/13/2023

Conditions of approval: 1. Confirmation samples must be representative of no more than 400 square feet.

From:	Hall, Brittany, EMNRD
То:	James Smith; Bratcher, Michael, EMNRD
Cc:	Kyle Norman; Brett Dennis; Enviro, OCD, EMNRD
Subject:	RE: [EXTERNAL] Chalupa North (nOY1706631442) confirmation sampling
Date:	Wednesday, March 15, 2023 1:56:24 PM

Thank you, James.

Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

**Brittany Hall** • Environmental Specialist Environmental Bureau Projects Group EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87110 505.517.5333 | <u>Brittany.Hall@emnrd.nm.gov</u> http://www.emnrd.nm.gov/ocd/

From: James Smith <JSmith@foundationenergy.com>
Sent: Wednesday, March 15, 2023 1:53 PM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Bratcher, Michael, EMNRD
<mike.bratcher@emnrd.nm.gov>
Cc: Kyle Norman <knorman@tasman-geo.com>; Brett Dennis <bdennis@tasman-geo.com>
Subject: [EXTERNAL] Chalupa North (nOY1706631442) confirmation sampling

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good afternoon Brittany.

I wanted to let you all know that Tasman plans on collecting confirmation samples at the Chalupa North (nOY1706631442) spill site this coming Monday, March 20<sup>th</sup> @ 0800.

Thank you.

## James Smith | HSE/Regulatory Supervisor

5057 Keller Springs Rd., Ste 650 Addison, TX 75001 P: 972.707.2595 C: 918.346.7350



Statement of Confidentiality: Information contained in this email, including any attachment(s), is legally privileged and confidential information intended for the use of the listed addressee(s). If the reader is not the intended recipient, you are hereby notified that any dissemination or distribution is strictly prohibited.

From:	Hall, Brittany, EMNRD
То:	James Smith; Bratcher, Michael, EMNRD
Cc:	Kyle Norman; Brett Dennis
Subject:	RE: [EXTERNAL] Chalupa South (nOY1706631442) confirmation sampling notice
Date:	Tuesday, April 11, 2023 7:00:59 AM

Thank you, James.

**Brittany Hall** • Environmental Specialist Environmental Bureau Projects Group EMNRD - Oil Conservation Division 1000 Rio Brazos Road | Aztec, NM 87110 505.517.5333 | <u>Brittany.Hall@emnrd.nm.gov</u> http://www.emnrd.nm.gov/ocd/

From: James Smith <jsmith@foundationenergy.com>
Sent: Tuesday, April 11, 2023 6:09 AM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Bratcher, Michael, EMNRD
<mike.bratcher@emnrd.nm.gov>
Cc: Kyle Norman <knorman@tasman-geo.com>; Brett Dennis <bdennis@tasman-geo.com>
Subject: [EXTERNAL] Chalupa South (nOY1706631442) confirmation sampling notice

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Good morning Brittany.

I wanted to let you all know that Tasman plans on collecting confirmation samples at the Chalupa South (nOY1706631442) spill site this coming Thursday, April 13<sup>th</sup> at 0800.

Thank you.

James Smith | HSE/Regulatory Supervisor 5057 Keller Springs Rd., Ste 650 Addison, TX 75001 P: 972.707.2595 C: 918.346.7350



# **APPENDIX B – MANIFESTS**

# **APPENDIX C – PHOTOGRAPHIC LOG**





















# **APPENDIX D – CERTIFIED LABORATORY ANALYTICAL REPORTS**



March 22, 2023

KYLE NORMAN TASMAN GEOSCIENCES 6899 PECOS ST. UNIT C DENVER, CO 80221

RE: 4951\_CHALUPA NORTH

Enclosed are the results of analyses for samples received by the laboratory on 03/21/23 15:58.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



4951

FOUNDATION ENERGY

Tamara Oldaker

### Analytical Results For:

	KYLE N 6899 PE	COS ST. UNIT C R CO, 80221	
Received:	03/21/2023	Sampling Date:	03/20/2023
Reported:	03/22/2023	Sampling Type:	Soil
Project Name:	4951_CHALUPA NORTH	Sampling Condition:	Cool & Intact

#### Sample ID: A1 - FL - 1 (H231285-01)

Project Number:

Project Location:

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/22/2023	ND	432	108	400	7.14	

Sample Received By:

### Sample ID: A1 - FL - 2 (H231285-02)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/22/2023	ND	432	108	400	7.14	

#### Sample ID: A1 - FL - 3 (H231285-03)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/22/2023	ND	432	108	400	7.14	

## Sample ID: A1 - FL - 4 (H231285-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	03/22/2023	ND	432	108	400	7.14	

#### **Cardinal Laboratories**

\*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C DENVER CO, 80221		
		Fax To:		
Received:	03/21/2023		Sampling Date:	03/20/2023
Reported:	03/22/2023		Sampling Type:	Soil
Project Name:	4951_CHALUPA NOR	TH	Sampling Condition:	Cool & Intact
Project Number:	4951		Sample Received By:	Tamara Oldaker
Project Location:	FOUNDATION ENERG	GY		

#### Sample ID: A1 - W - 1 (H231285-05)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/22/2023	ND	432	108	400	7.14	

### Sample ID: A1 - W - 2 (H231285-06)

Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	03/22/2023	ND	432	108	400	7.14	

#### Sample ID: A5 - FL - 1 (H231285-07)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	03/22/2023	ND	432	108	400	7.14	

#### Sample ID: A5 - FL - 2 (H231285-08)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A5 - FL - 3 (H231285-09)

Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	03/22/2023	ND	432	108	400	3.64	

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\*=Accredited Analyte

Celecz D. Keine

Celey D. Keene, Lab Director/Quality Manager



		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C		
		DENVER CO, 80221		
		Fax To:		
Dessived	02/21/2022		Compling Data	02/20/2022
Received:	03/21/2023		Sampling Date:	03/20/2023
Reported:	03/22/2023		Sampling Type:	Soil
Project Name:	4951_CHALUPA NO	RTH	Sampling Condition:	Cool & Intact
Project Number:	4951		Sample Received By:	Tamara Oldaker
Project Location:	FOUNDATION ENER	RGY		

#### Sample ID: A5 - FL - 4 (H231285-10)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	03/22/2023	ND	432	108	400	3.64	

### Sample ID: A5 - FL - 5 (H231285-11)

Chloride, SM4500Cl-B	mg	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A5 - FL - 6 (H231285-12)

Chloride, SM4500Cl-B	le, SM4500Cl-B mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A5 - FL - 7 (H231285-13)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	03/22/2023	ND	432	108	400	3.64	

### Sample ID: A5 - FL - 8 (H231285-14)

Chloride, SM4500Cl-B	mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	03/22/2023	ND	432	108	400	3.64	

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Celecz D. Keine

Celey D. Keene, Lab Director/Quality Manager



		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C		
		DENVER CO, 80221		
		Fax To:		
Received: Reported: Project Name: Project Number: Project Location:	03/21/2023 03/22/2023 4951_CHALUPA NO 4951 FOUNDATION ENEF		Sampling Date: Sampling Type: Sampling Condition: Sample Received By:	03/20/2023 Soil Cool & Intact Tamara Oldaker

#### Sample ID: A5 - FL - 9 (H231285-15)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/22/2023	ND	432	108	400	3.64	

### Sample ID: A5 - FL - 10 (H231285-16)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A5 - FL - 11 (H231285-17)

Chloride, SM4500Cl-B	i00Cl-B mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A5 - FL - 12 (H231285-18)

Chloride, SM4500Cl-B	mg/kg			Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1790	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A5 - W - 1 (H231285-19)

Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	03/22/2023	ND	432	108	400	3.64	

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\*=Accredited Analyte

Celecz D. Keine

Celey D. Keene, Lab Director/Quality Manager



		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C		
		DENVER CO, 80221		
		Fax To:		
Received:	03/21/2023		Sampling Date:	03/20/2023
			1 5	1 1
Reported:	03/22/2023		Sampling Type:	Soil
Project Name:	4951_CHALUPA NOF	RTH	Sampling Condition:	Cool & Intact
Project Number:	4951		Sample Received By:	Tamara Oldaker
Project Location:	FOUNDATION ENER	GY		

#### Sample ID: A5 - W - 2 (H231285-20)

Chloride, SM4500Cl-B	M4500Cl-B mg/kg Analyzed By: AC								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/22/2023	ND	432	108	400	3.64	

## Sample ID: A5 - W - 3 (H231285-21)

Chloride, SM4500Cl-B	de, SM4500Cl-B mg/kg			d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	03/22/2023	ND	432	108	400	3.64	

### Sample ID: A4 - FL - 1 (H231285-22)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A4 - FL - 2 (H231285-23)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	03/22/2023	ND	432	108	400	3.64	

### Sample ID: A4 - W - 1 (H231285-24)

Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	03/22/2023	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager


		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C		
		DENVER CO, 80221		
		Fax To:		
Received: Reported: Project Name:	03/21/2023 03/22/2023 4951_CHALUPA NOR	тн	Sampling Date: Sampling Type: Sampling Condition:	03/21/2023 Soil Cool & Intact
Project Number: Project Location:	4951 Foundation Energ	GY	Sample Received By:	Tamara Oldaker

#### Sample ID: A2 - FL - 1 (H231285-25)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	03/22/2023	ND	432	108	400	3.64	

# Sample ID: A2 - FL - 2 (H231285-26)

Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/22/2023	ND	432	108	400	3.64	

### Sample ID: A2 - FL - 3 (H231285-27)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	03/22/2023	ND	432	108	400	3.64	

#### Sample ID: A2 - W - 1 (H231285-28)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	03/22/2023	ND	448	112	400	0.00	QM-07

## Sample ID: A3 - FL - 1 (H231285-29)

Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	03/22/2023	ND	448	112	400	0.00	

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C		
		DENVER CO, 80221		
		Fax To:		
Received: Reported: Project Name:	03/21/2023 03/22/2023 4951_CHALUPA NOR	тн	Sampling Date: Sampling Type: Sampling Condition:	03/21/2023 Soil Cool & Intact
Project Number: Project Location:	4951 Foundation Energ	GY	Sample Received By:	Tamara Oldaker

#### Sample ID: A3 - FL - 2 (H231285-30)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	03/22/2023	ND	448	112	400	0.00	

# Sample ID: A3 - FL - 3 (H231285-31)

Chloride, SM4500Cl-B	Analyze	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	03/22/2023	ND	448	112	400	0.00	

### Sample ID: A3 - FL - 4 (H231285-32)

Chloride, SM4500Cl-B	mg/kg		Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	03/22/2023	ND	448	112	400	0.00	

#### Sample ID: A3 - FL - 5 (H231285-33)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	03/22/2023	ND	448	112	400	0.00	

## Sample ID: A3 - W - 1 (H231285-34)

Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/22/2023	ND	448	112	400	0.00	

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



		TASMAN GEOSCIENCES KYLE NORMAN 6899 PECOS ST. UNIT C DENVER CO, 80221		
		Fax To:		
Received:	03/21/2023		Sampling Date:	03/21/2023
Reported:	03/22/2023		Sampling Type:	Soil
Project Name:	4951_CHALUPA NOR	TH	Sampling Condition:	Cool & Intact
Project Number:	4951		Sample Received By:	Tamara Oldaker
Project Location:	FOUNDATION ENERG	βY		

#### Sample ID: A3 - W - 2 (H231285-35)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	03/22/2023	ND	448	112	400	0.00	

# Sample ID: A6 - FL - 1 (H231285-36)

Chloride, SM4500Cl-B	Chloride, SM4500Cl-B mg/kg								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	03/22/2023	ND	448	112	400	0.00	

### Sample ID: A6 - FL - 2 (H231285-37)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/22/2023	ND	448	112	400	0.00	

#### Sample ID: A6 - FL - 3 (H231285-38)

Chloride, SM4500Cl-B	/kg	Analyze	d By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/22/2023	ND	448	112	400	0.00	

## Sample ID: A6 - FL - 4 (H231285-39)

Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/22/2023	ND	448	112	400	0.00	

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\*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



TASMAN GEOSCIENCES
KYLE NORMAN
6899 PECOS ST. UNIT C
DENVER CO, 80221
Fax To:

Received:	03/21/2023	Sampling Date:	03/21/2023
Reported:	03/22/2023	Sampling Type:	Soil
Project Name:	4951_CHALUPA NORTH	Sampling Condition:	Cool & Intact
Project Number:	4951	Sample Received By:	Tamara Oldaker
Project Location:	FOUNDATION ENERGY		

#### Sample ID: A6 - FL - 5 (H231285-40)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/22/2023	ND	448	112	400	0.00	

## Sample ID: A6 - W - 1 (H231285-41)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/22/2023	ND	448	112	400	0.00	

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



# **Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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#### \*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Tas	sman Geosciences							Γ			BI	LL TO					A	NAL	YSIS	REC	QUES	ST		
Project Manager: Ky	le Norman							P.0	). #:	_														
Address: 2620 W.	Marland Blvd.							Company: Tasman Geo				1												
City: Hobbs	State: NM	Zip: 882	240					Attn: Kyle Norman			1													
Phone #: 575-318-5	017 Fax #:							Add	dres	s: 26	20 W	V. Marland		1										
Project #: 4951	Project Owne	er: Founda	tion	Energ	y			City	: Ho	bbs			1.1	1X			6							
Project Name: 4951_0	Chalupa North							Sta	te: N	М	Zip:	88240		19		es	Rush							
Project Location:								Pho	one #	t: 5	75-3	818-5017		-	BTEX	Chlorides								
Sampler Name: Brett	t Dennis							Fax	#:			/		8	1 E	2	24-hr							
FOR LAB USE ONLY					MA	TRIX		_	PRE	SER	V. /	SAM	PLING	H	1	5	4							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	T										
1	A1-FL-1	C			)					X		3/20/23	1150			X	X							
2	A1-FL-2	C			)					х		3/20/23	1155			X	X							
3	A1-FL-3	C			)					X		3/20/23	1200			X	X							
4	A1-FL-4	C			)					X		3/20/23	1205			X	X							
5	A1-W-1	C			)					X		3/20/23	1210			X	Χ.							
6	A1-W-2	C			)					X		3/20/23	1215	1		X	X							
2	A5-FL-1	C			)					X		3/20/23	1230			X	X							
8	A5-FL-2	C			)	(				X		3/20/23	1232			X	X							
9	A5-FL-3	C			)					X		3/20/23	1234			X	X							
10	A5-FL-4	C			)					x		3/20/23	1236			X	X							

PLEASE NOTE: Liability and Damages. Cardinal's liability and clerifs exclusive remedy for any claim arising whether based in contract or hor, shall be limited to the amount paid by the client to the analyses. All claims including those for neggence and any oner cause whatsoever shall be liable for incidential or consequential damages, including whot limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regarding whot limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regarding whot limits assed upon any of the above stated reasons or otherwise.

Relinquished By:	Time:/558	ved By: Iamara al	Jaker	Phone Result: Fax Result: REMARKS: email resu	□ Yes □ Yes	Add'I Phone #: Add'I Fax #: )tasman-geo.com; bdennis@tasman-
Relinquished By:	Time:	ved By:				 n-geo.com;
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	#1/3 2/2.2°	Sample Condition Cool Intact	(Initials)			

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

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# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ta	sman Geosciences							Г			B	ILL TO		ANALYSIS REQUEST										
Project Manager: Ky	le Norman							P.0	). #:															
Address: 2620 W.	Marland Blvd.							Co	mpa	ny:	Tasr	man Geo		1										
City: Hobbs	State: NM	Zip: 882	240					Att	n: Ky	yle I	Norn	nan		1										
Phone #: 575-318-5	017 Fax #:							Ad	dres	s: 26	520 V	V. Marland		1										
Project #: 4951	Project Owne	r: Founda	tion	Ener	gy			Cit	y: Ho	bbs				١X			6							
Project Name: 4951_0	Chalupa North							Sta	te: N	М	Zip:	88240		2		es	Rush							
Project Location:								Ph	one #	#: 5	75-3	318-5017		-	BTEX	Chlorides								
Sampler Name: Bret	t Dennis							Fax	: #:	35.1				8	1 m	2	24-hr							
FOR LAB USE ONLY					M	ATRI	X	_	PRE	SER	V.	SAM	PLING	H	-	10	4							
Lab I.D. H231285	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	F										
11	A5-FL-5	C				X				X		3/20/23	1238			X	X							
12	A5-FL-6	C				K				X		3/20/23	1240			X	X							
13	A5-FL-7	C				K				X		3/20/23	1300			X	X							
14	A5-FL-8	C				X				X		3/20/23	1305			X	X							
15	A5-FL-9	C				X				X		3/20/23	1310			X	X							
16	A5-FL-10	C			2	K				X		3/20/23	1312			X	X							
17	A5-FL-11	C			2	K				Х		3/20/23	1314			х	X							
18	A5-FL-12	C			)	K				Х		3/20/23	1316			X	X							
19	A5-W-1	C			2	K				X		3/20/23	1320			х	X							
20	A5-W-2	C				K				X		3/20/23	1322			X	X							

PLEASE NOTE: Labelly and banages, cardials satisfy and clears exclusive remery for any came arising where resources or increase or increas

Relinquished By:	Date:3/21/23 Recei	eived By:		Phone Result: Fax Result:	Yes Yes	⊡ · No □ · No	Add'I Phone #: Add'I Fax #:
132015	Time 538	Sallara de		REMARKS:	lte: kn/	ormon@	tasman-geo.com; bdennis@tasman-
Relinquished By:	Date: Recei	eived By:				_	-
	Time:		-	geo.com; i	flores(	gtasma	n-geo.com;
		Sample Condition Cool	CHECKED BY:				
Delivered By: (Circle One)	ttll-						
Sampler - UPS - Bus - Other:	411	Intact	(Initials)				
	1	Yes Yes					
2.80	12.20	No No	7				

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# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: 1	'asman Geosciences								BILL TO							ANALYSIS REQUEST											
Project Manager: H	Kyle Norman								P.0	. #:																	
Address: 2620 V	V. Marland Blvd.								Con	npa	ny:	Tasr	man Geo		1											1	
City: Hobbs	State: NM	Zip: 88	240						Attr	n: Ky	le N	Norn	nan		1												
Phone #: 575-318	-5017 Fax #:								Add	Ires	s: 26	20 V	V. Marland		1												
Project #: 4951	Project Owne	r: Founda	ation	Ener	rgy				City	: Ho	bbs				1X			6									
Project Name: 4951	_Chalupa North								Stat	e: N	М	Zip:	88240		2		es	Rush									
Project Location:									Pho	ne #	t: 5	75-3	318-5017		-	BTEX	Chlorides	Ř									
Sampler Name: Br	ett Dennis					-			Fax	#:					8	1	2	24-hr									
FOR LAB USE ONLY			Τ			MAT	RIX	_	_	PRE	SER	V.	SAN	PLING	H	1	5	4								1	
Lab I.D. H231285	Sample I.D.	(G)RAB OR (C)OMP	14	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL 🔨	OTHER :	DATE	TIME	F												
21	A5-W-3	C				Х					х		3/20/23	1324			X	X									
22	A4-FL-1	C				Х					х		3/20/23	1400			X	X									
23	A4-FL-2	C				Х					х		3/20/23	1405			X	X			-						
34	A4-W-1	C				Х					х		3/20/23	1410			X	X									
25	A2-FL-1	C				Х					х		3/21/23	0800			X	X									
26	A2-FL-2	C				Х					Х		3/21/23	0802			X	X									
37	A2-FL-3	C				Х					х		3/21/23	0804			X	х									
28	A2-W-1	C				Х					Х		3/21/23	0805			X	X									
29	A3-FL-1	C		Γ		х					х		3/21/23	0815			X	X									
30	A3-FL-2	C				X					X		3/21/23	0817			X	X									

PLEASE NOTE: Labelly and bitmages. Cardna's tablely and client's exclusive remedy for any cama ansarg where to ease in contract on the anisotic part of the client to the

Relinquished By:	Date 3/21/23 Rec	ceived By:		Phone Result: Fax Result:	Yes Yes	□ · No	Add'I Phone #: Add'I Fax #:
Tietts	Time 558	Muara Va		REMARKS:	ulto: kn	ormon	Staaman aan anni hdannis@taaman
Relinguished By:	Date: Rec	ceived By:					tasman-geo.com; bdennis@tasman-
litering alone a by:				aeo.com:	Iflores	@tasma	an-geo.com;
	Time:			,		0	5
Delivered By: (Circle One)	41	1 2 Sample Condition Cool	CHECKED BY:				
Sampler - UPS - Bus - Other:	#11	Intact	(Initials)				
Campion of o Date Canon	A 1	Ves Ves	2rc				
2.80	2.20	□ No □ No	γ				

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# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ta	sman Geosciences										BI	ILL TO		ANALYSIS REQUEST											
Project Manager: Ky	vle Norman							P.0	#:																
Address: 2620 W.	Marland Blvd.							Con	npan	y: '	Tasr	man Geo		1											
City: Hobbs	State: NM	Zip: 88	240	1				Attr	: Ky	le N	lorn	nan		1											
Phone #: 575-318-5	6017 Fax #:							Add	ress	26	20 V	V. Marland		1											
Project #: 4951	Project Own	er: Found	ation	Ene	rgy		_	City	: Hol	obs				1X			C C								
Project Name: 4951_	Chalupa North							Stat	e: NI	M	Zip:	88240		19		es	Rush					1			
Project Location:								Pho	ne #:	: 57	75-3	318-5017		-		<u>rid</u>	Ř								
Sampler Name: Bret	t Dennis					-		Fax	#:					8	BTEX	Chlorides	24-hr								
FOR LAB USE ONLY			Τ	F	M	ATRIX	_		PRES	SER	V.	SAM	PLING	H	-	1	4								
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	T											
31	A3-FL-3	C			)	(				X		3/21/23	0819			X	X								
31 32	A3-FL-4	C				(				X		3/21/23	0821			Х	X								
33	A3-FL-5	C				(				X		3/21/23	0823			х	X								
34	A3-W-1	C				(				X		3/21/23	0825			Х	X						1		
35	A3-W-2	C				(				X		3/21/23	0827			Х	X								
36	A6-FL-1	C				(				X		3/21/23	0900			х	X								
37	A6-FL-2	C				(				X		3/21/23	0902			х	X								
38	A6-FL-3	C	T			(				X		3/21/23	0904			Х	X								
39	A6-FL-4	C				(				X		3/21/23	0906			Х	X								
40	A6-FL-5	C				(				X		3/21/23	0908			х	X								
41	A6-W-1	C				(				x		3/21/23	0910			Х									

PLEASE NOTE: Lability and Damages. Cardina's lability and client's exclusive remedy for any claim arising whether based in contract or fort, shall be limited to he amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived un within 30 days after completion of the applicable service. In no event shall Cardina be liable for incidental or consequent all and manages, including without imitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries affiliates or successors arising out of or related to the performance of services hermuted by Cardinal, regardless of whither such claims in stated upon any of the above stated reasons or otherwise.

Relinquished By: Relinquished By:	Date: Receiv Times Receiv Date: Receiv Time:	Jamara d	ldabel		orman@	Add'l Phone #:  Add'l Fax #: tasman-geo.com; bdennis@tasman n-geo.com;	-
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	#113 1°c / 2.2°	Sample Condition Cool Intact Yes Yes No No	CHECKED BY: (Initials)				

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# **APPENDIX E – CLOSURE FORM (FORM C-141)**

Received by OCD: 6/19/2023 10:25:55 AM Form C-141 State of New Mexico

Oil Conservation Division

	Page 47 of 48
Incident ID	nOY1706631442
District RP	
Facility ID	
Application ID	

# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<b><u>Closure Report Attachment Checklist</u>:</b> Each of the following i	tems must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rer human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regula restore, reclaim, and re-vegetate the impacted surface area to the co accordance with 19.15.29.13 NMAC including notification to the C	ations. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.
Printed Name: James Smith	Title: <u>HSE/Regulatory Supervisor</u>
Signature:	Date:06/06/2023
email: jsmith@foundationenergy.com	Telephone: <u>972-707-2595</u>
OCD Only	
Received by: Jocelyn Harimon	Date: 06/20/2023
remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and/	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by: Hall	Date: 7/7/2023
Printed Name: Brittany Hall	Title: Environmental Specialist

Page 6

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:		OGRID:
FOUNDATION ENERGY MANAGEME	NT, LLC	370740
5057 KELLER SPRINGS RD		Action Number:
ADDISON, TX 75001		230055
		Action Type:
		[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created Condition Condition By Date bhall 7/7/2023 None

Action 230055